

SHEFFIELD BOARD OF HEALTH
WELL REGULATIONS

- I.A. Purpose.** It is the purpose of these regulations to protect the public health, safety and welfare by ensuring housing units with no access to public water supplies the supply of safe drinking water from private wells and to provide for the protection of the town's ground water resources.
- I.B. Authority.** These regulations shall be effective on and after **June 1, 1996**, and so remain until modified or amended by the Board of Health.

They are enacted by the Sheffield Board of Health under the authority which includes but is not limited to one or more of the following: Mass. General Laws, Chapter 111, sections 31, 122, 122A, 127, 143, 155, 187, 188: Code of Mass. Regulations (CMR) 11.02, and Mass. General Law Chapter 40, Section 54.

Any and all previous regulations concerning private wells are hereby repealed.

II. Definitions.

Abandoned Well: A private well that meets any of the following criteria: (1) construction was terminated prior to completion of the well, (2) the well owner declares that the use of the well has been permanently discontinued, (3) the well is in such a state of disrepair that its continued use is impractical or represents a physical threat, (4) the well has the potential for transmitting contaminants into the aquifer and the situation cannot be corrected.

Board of Health: The Board of Health of the town or its authorized agent.

Certified Laboratory: any laboratory which has certification for the bacterial and chemical parameters requested by the Department of Environmental Protection as provided in the most recent edition of "Certification Status of Commercial Environmental Laboratories."

Private Well: Any non-public well, serving less than 15 houses and serving fewer than 25 people as defined in 310 CMR 22.02.

Well: A bored, drilled, or driven well or a dug hole with a depth greater than its largest surface dimension for the purpose of obtaining potable water.

Well Driller: Any person, association, partnership, company, or corporation that constructs wells and is registered with the Division of Water Resources of the Department of Environmental Management in compliance with the Well Diggers and Drillers Registration, 313 CMR 3.00 (7/13/89).

Water Supply Certificate: A certificate issued by the Board of Health which authorizes the use of a private well as a water supply.

Decommissioning a Well: The plugging of an abandoned well.

III. Standards for the Location, Construction. Decommissioning, Water Quality and Water Quantity.

A. Location of Wells

- 1) In establishing the location of a well, actual or possible sources of contamination which exist or are proposed to exist within two hundred (200) feet of the proposed well site need to be identified. Private wells shall be located to avoid all potential sources of contamination.

The following minimum lateral distances shall apply for each listed source of contamination for all shallow wells:

Subsurface sewage disposal field (Leaching facility, in use, abandoned or reserve area), 150 feet, cesspool, seepage pit, 150 feet; septic tank, 100 feet; Sewer lines (water tight joints), 50 feet; Property Line, 30 feet; Public Way, 50 feet; Driveways, 20 feet; Underground fuel storage tanks with the exception of propane, 200 feet; stables, barnyards, manure piles, manure storage tank, feedlots, 150 feet.

The following minimum lateral distances shall apply for each listed source of contamination for all drilled wells:

Subsurface sewage disposal field (Leaching facility, in use, abandoned or reserve area), 100 feet, cesspool, seepage pit, 150 feet; septic tank, 50 feet; Sewer lines (water tight joints), 50 feet; Property Line, 10 feet; Public Way, 25 feet; Driveways, 20 feet; Underground fuel storage tanks, 20-50 feet; stables, barnyards, manure piles, manure storage tank, feedlots, 150 feet.

- 2) Where deemed necessary or appropriate by the Board of Health, the above distances may be increased, or reasonable means of protection may be required or both. The Board may impose minimum lateral distance requirements from other potential sources of contamination not listed above. All such special requirements shall be added by the Board as conditions of the well construction permit.
- 3) The water coming from the well to the house will be installed and certified water tight by a well driller or by a licensed plumber.

B. Well Construction Standards.

- 1) All deep wells shall be constructed by a registered well driller. A copy of the well driller's Certificate of Registration must accompany application for a permit.
- 2)
 - a. All wells (both deep and shallow) shall be constructed in compliance with the sections of the "Private Well Guidelines" of the Department of Environmental Protection's Division of Water Supply, October 30, 1989, that apply to well construction and well decommissioning (pages 22 through 67; and pages 92 to 101) They constitute part of these regulations, and are incorporated herein by reference. A copy of the guidelines is located in the Town Clerk's Office.
 - b. All deep wells will be grouted. Bentonite grouting is acceptable, although pressure grouting is recommended. The following must be adhered to:
 - (1) "Private wells drilled in bedrock shall be grouted from the top of the weathered rock interface to fifteen (15) feet into competent bedrock. Either neat cement grout or sand

cement grout shall be used and it shall be emplaced using standard grouting techniques as described in the DEP Private Wells Guidelines.”¹

- (2) “All wells completed with the casing extending above grade shall have a surface seal designed to eliminate the possibility of surface water flowing down the annular space between the well casing and the surrounding backfilled materials. The surface seal shall extend to depth below the local frost line.”²

c. All well penetrations shall be made water-tight. After the penetration is made, the well casing shall be filed smooth, both inside and outside. The use of cutting torches for this purpose is prohibited. The installer will submit a statement of water-tightness of the system to the Board of Health.

- 3) Well Drillers and constructors of shallow wells need to certify in writing that they have complied with the “Private Well Guidelines” as specified above in order to receive the Water Supply Certificate, provide a detailed description of the well construction, location on the property, and “as built” approval by a Board of Health member or agent.

C. Well Decommissioning Standards

- 1) A well that is abandoned shall be decommissioned (plugged) to protect the ground water supply and to eliminate potential physical hazards.
- 2) All abandoned wells shall be destroyed in compliance with the “Private Well Guidelines” in decommissioning the well.
- 3) Well Drillers need to certify in writing that they have complied with the “Private Well Guidelines” in decommissioning the well.

D. Water Quality Standards

- 1) No private well shall be used as a water supply and no building permit shall be issued for (1) new construction on the property where the well is located, unless and until the water derived from the well has been tested or (2) for additions which will allow multi-family residences or which will increase the number of nuclear families in residences. This does not apply to minor renovations/additions.
- 2) Chemical and bacteriological analyses shall be conducted by a certified laboratory and shall meet the following minimum standards:

Coliform bacteria, none detected; Sodium (Na), 28 mg/1; Chloride (Cl), 250 mg/1; Nitrate Nitrogen (N), 10 mg/1; Nitrite Nitrogen, 1 mg/1.

¹Department of Environmental Protection Model Board of Health Regulations for Private Wells, October 30, 1989, p.12, Section IX,D
²Ibid.

In addition the following water quality tests and standards will be recommended to be conducted for the informational benefits of the landowner.

Total Dissolved Solids, 500 mg/1; Iron (Fe), 0.3 mg/1; Manganese (Mn), 0.05 mg/1; pH, 6.5-8.5; Total hardness, 180 mg/1.

- 3) The Board of Health strongly recommends a 2nd potability test 6 months after initial testing and activation.
- 4) Additional or repeated tests may be required by the Board where, in the opinion of the Board, if it is necessary for the protection of the public health, safety and welfare.
- 5) Optional water test recommended: radon

E. Water Quantity Standards

- 1) Yield test pumping shall be conducted at a rate at least equally to the pumping rate expected during normal well use and shall be conducted for a minimum of four hours.

- 2) The required minimum well yield will vary depending on the depth of the well. Overall, a well is required to yield 110 gallons/bedroom/day as per Title V, in specifics, the minimum well yield shall conform to the following table:

Depths of Water in Well	Gallons/minute for 4 hours
0-150 feet.....	3.6
150-200 feet.....	4
200-250 feet.....	2-3
250-300 feet.....	1-2
300 feet and deeper	1/2

In no instance shall the well be permitted to yield less than the amount of gallons per day arrived at by applying the following formula: $(\# \text{ of bedrooms} + 1) \times 110 \text{ gallons} \times (\text{safety factor of } 2) = \text{minimum gallons/day}$.

IV. Procedures for Obtaining a Water Supply Certificate and a Well Decommissioning Permit

A. Water Supply Certificate Procedures

1) Well Construction Permit Application

- a. Four weeks before construction is scheduled to begin, an application for a well construction permit shall be submitted by the property owner or his/her designated agent to the Board of Health on a form provided by the Board of Health.
- b. The Board will take action on the application within three weeks of the submission date.
- c. The Tax Map and Parcel Number, the location of the proposed well to be constructed and a general written summary of any possible sources of contamination with 200 (see III, A.1) feet shall be submitted to the Board of Health with the permit application.
- d. If the Board of Health deems necessary, the application for a well construction permit shall be submitted to the Board of Health and accompanied by an extended plot plan, produced by a Civil or Sanitary Engineer or a Registered Surveyor which will show distances less than 200 feet from the proposed well site to the following:
 - (1) Existing and proposed structures.
 - (2) Subsurface waters and subsurface drainage courses
 - (3) Subsurface sewage disposal fields, trenches, or pits and adjoining septic tanks or cesspools.
 - (4) Subsurface fuel storage tanks
 - (5) Other potential sources of pollution an experienced well driller should reasonably be expected to recognize

(6) Property Lines

(7) Public ways

For new construction, the plan submitted to comply with Title V requirements will be acceptable for this purpose if it includes the above data for the well.

- e. Should the site of the well need to be located more than ten feet from the intended location as indicated on the original plan, a new plan indicating the new location must be submitted to the Board of Health within 30 days.
- f. The Board of Health shall charge a fee for a well construction permit to be set by the Board. The fee is to be paid when the application is filed with the Board. The fee will include a Board of Health member or Health agent site visit to check the location of the well and to assure that the water sample has been properly taken and sealed.
- g. Well construction may proceed upon approval of a permit application in the form of a well construction permit issued by the Board.
- h. All permits for well construction and decommissioning shall expire at the end of twelve months (12 months) from the date of issuance. Permits may be extended for an additional six months (6 months) if a written request is received by the Board of Health prior to the expiration date. No additional fee shall be charged for an extension, provided there is no change in the plans for the proposed well.

After a permit has expired, a new application and a new fee must be submitted to the Board.

- g. Permits and applications are not transferable

2) Water Supply Certificate

- a. The following shall be submitted to the Board of Health to obtain a water supply certificate:

- (1) A well construction permit
- (2) A copy of the Water Well Completion Report as required by the Division of Water Resources/Dept. of Environmental Management to be provided by the well driller within 30 days from the completion of the well (see CMR 313, section 3.00)
- (3) Water Testing Results. (1) Water samples for bacterial-potability analysis shall be by an agent of the Board, following well development and disinfection and be submitted for testing to a State certified testing lab. (2) The well driller can take the pump test and provide the results to the Board.
- (4) Certificate of Construction by the well driller that s/he has complied with Department of Environmental Protection's "Private Well Guidelines" sections pertaining to well construction and that are part of these regulations (see III B.2).

- (5) Water Quantity/Quality Certification statement from the well driller that the minimum yield has been met.
- b. Upon receipt to all the above documents the Board of Health shall determine whether the water supply meets all the water quantity and water quality requirements for private water supplies in the town.
 - (1) Upon an affirmative determination, the Board of Health shall issue a water supply certificate.
 - (2) Upon a negative determination, or if the Board deems it necessary to protect the public health, safety and welfare, the Board shall issue a water supply disapproval letter which requires additional water quality analysis, or quantity testing or both.
 - (3) the Board may, at its discretion, issue a conditional water supply certificate. A conditional certificate shall set forth the conditions which the Board deems necessary to ensure fitness, purity and quantity of the water derived from that well. This may include but not be limited to requiring treatment of the water or regular testing.
- 3) Well Decommissioning Procedures
 - a. The Board **requires** the owners of wells that are no longer used for supplying water to declare those wells abandoned and to have them decommissioned. Such action will minimize the risk of pollution of ground water through abandoned wells and will protect the well owner from any future liability for such pollution.
 - b. An application for a well decommission permit shall be submitted by the property owner together with the above statement to the Board of Health on a form provided by the Board **prior** to the decommissioning of the well.
 - c. The Board will then issue a well decommission permit. Applicant will pay the permit fee.
 - d.
 - 1) After the well has been decommissioned, the well driller shall file a report with the Board stating that he has complied with the sections of the "Private Well Guidelines" of the Dept. of Environmental Protection that pertain to well decommissioning and that are part of these regulations.
 - 2) After the shallow well has been decommissioned, the owner or well driller shall file a report with the Board stating that he/she has complied with the sections of the "Private Well Guidelines" of the Dept. of Environmental Protection that pertain to well decommissioning and that are part of these regulations.

- Administration and Enforcement
 - General Enforcement
- Environmental Code (310 CMR, 11.00) shall govern the enforcement of these regulations

B. Separate Violations

Each day's failure to comply with any provisions shall constitute a separate violation. Each numbered or lettered section or subsection of these regulations violated shall constitute a separate violation.

C. Severability

If any paragraph, section, clause, provision, phrase or work of these regulations shall be adjudged not valid, the adjudication shall apply only to the material so adjudged and the remainder of these regulations shall be deemed to remain valid and effective.

D. Amendments

These regulations or any portions thereof may be amended, supplemented or replaced from time to time by the Board, with notice as provided by law, on its own motion or by petition.

E. Invalidation by State Law

Any part of these regulations subsequently invalidated by a new state law or modification of an existing state law shall automatically be brought into conformity with the new or amended law and shall be deemed to be effective immediately, without recourse to a public hearing and the customary procedures for amendment or repeal of such regulation.

F. Agent

An agent of the Board of Health is any person authorized in writing by the Board to act under these regulations. No agent may vary any provision of these regulations without the approval of the Board. Wherever reference is made in these regulations to "Board of Health" or "Board" it shall mean the Board of Health of the town or its authorized agent.

G. Variance

1. the Board of Health may vary the application of any provision of these regulations with respect to any particular case when, in the Board's opinion, both of the following conditions are fulfilled:
 - a. The enforcement thereof would do manifest injustice.
 - b. The applicant has proven that the same degree of environmental protection, and protection of the public health, safety and welfare can be achieved without strict application of the particular provision. The alternative means of protection shall be detailed and documented by the applicant to the satisfaction of the Board.
2. Every request for a variance shall be made in writing and shall state the specific variance sought and the reasons therefore.
3. Any variance granted by the Board shall be in writing. Any denial of the variance shall also be in writing and shall contain a brief statement of the reason for denial. A copy of each variance shall be conspicuously posted for thirty (30) days following its issuance and shall be available to the public at all reasonable hours. No work shall be done under any variance until 30 days elapse from its issuance, unless the Board certifies in writing that an emergency exists.
4. Any variance may be subject to such qualification, revocation suspension, condition, or expiration as it is provided in these regulations or as the Board expresses in its grant of the variance. A variance may otherwise be revoked, modified or suspended, in whole or in part, only after the holder thereof has been notified in writing and has been given an opportunity to be heard, in conformity with the requirements of Title 1 of the State Environmental Code (CMR 310, 11.00) for orders and hearings.

H. Forms

Appended to these regulations are one or more sample forms for the administration of the regulations. The administrative content of these forms may be revised by the Board from time to time by administrative action of the Board apart from section V.D.

I. Fines

Whosoever violates any of these rules and regulations shall upon conviction be fined not less than \$100 and no more than \$500 for each violation. Each day that such violation continues after a notice of violation has been given shall constitute a separate violation.